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President's Office

Highways and the Tax Payer

By

A. J. BROSSEAU

President, Mack Trucks, Inc., and Member of Highways Committee
National Automobile Chamber of Commerce

308

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Box 111

An Address on "Problems in Finance" delivered
at the Second National Conference on Education
for Highway and Highway Transport Engineering,
held under the auspices of the Highway Education
Board at Washington, D. C., October 26-28, 1922.

NATIONAL AUTOMOBILE CHAMBER OF COMMERCE

366 Madison Avenue, New York City

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Highways and the Tax Payer

A Discussion of Problems in Highway Finance

by

A. J. BROSSEAU

SIGNIFICANT POINTS IN THE ADDRESS

Motor transport is a major phase in public service.

Engineering records show that from 40% to 50% of highway cost is permanent investment.

A highway, properly maintained, is a permanent highway and will not "wear out before the bonds mature".

Highway construction costs should be divided between the present generation and those to come who also benefit.

Long term bonds are economical, as they permit more extended construction immediately with benefits resulting promptly.

ONE engaged in the every-day occupation of selling transportation struggles with many unsolved problems, some of which I should like to place before the educator.

Transportation is, perhaps, the most vital factor in the lives of all of us. How much attention has it been given in the text-book, and in class room work?

How does the educator define transportation?

Does he think of it as it was twenty years ago when the railroad was the only carrier, or in terms of the highly complex relationships of today when we have highway, water-way, electric and steam rail lines, and very soon airways to be correlated?

Is he dealing with it as it will be in the future when these agencies may overturn all of our accepted theories of economics, social life and political boundaries?

Has he taken into account the fact that highway transport has already injected new factors into our economics?

Does he understand the relation between the highway and the vehicle and the important service they render to the public?

Does he know that the highway and the vehicle together constitute a great factory which produces the commodity we call transportation?

Does he realize the importance of these factors in the financial scheme of things and is he prepared to assist in developing sound theories not alone of finance but of the actual physical structure of road and vehicle?

Does he know that transportation is today the most important problem confronting the nation, and, if we are to arrive at sound conclusions, one that requires the best efforts of the most efficient research men obtainable?

Has it ever occurred to him that the highways are not built for the individual owners, but for the public, and that the privately owned vehicles operating over the roads are in reality mere agencies for the convenience and comfort of this same public?

Major Phase of Public Service

I ask these questions because before we can approach the problems of highway finance with the enormous sums involved, it is essential for us to understand that we are dealing with a major phase of public service.

If highway transport had not become a vital element in serving the public, if the public realizing its cost did not still demand it because of the benefits which it brings, then the educator would not be justified in considering this question.

The recognition which national, state and county governments have given through the large appropriations already made for highway construction, and the ever-widening use of the motor vehicle, demonstrate conclusively the public acceptance of individual transportation.

Is not the task of the immediate future, then, that of laying out broad policies which will make highway transport of the greatest benefit to all?

Must Readjust Policies

The first step, as I see it, is a readjustment of our financial policies which will permit the counties and the states to carry on

their program of highway construction and maintenance in the most equitable manner possible.

Incidentally, we will have to readjust our administrative policies so that when these expenditures are made, they shall fit most exactly with the needs of public service.

Every dollar of expenditure must return at least a dollar's worth of service.

A survey of highway development as it is today shows that we are annually appropriating sums aggregating more than \$1,000,000,000 for city and rural highway construction and maintenance. A further survey of our needs shows that this program must be continued for ten years or more if we are to arrive at a connected system of highways which will render the greatest possible service to the public.

If we were dealing with this question in the untroubled days before the world war, the matter of finance would be a relatively easy one and we would not be so much concerned with ways and means. But it is necessary to remember that today the nation is carrying a heavy tax budget, and, what is more important, that the state and county levies are at higher levels than they have been in the past.

We must weigh well all of the elements entering into any appropriation for any purpose and only those must be made which we know will surely return a direct profit to the public. Further we must seek to definitely allocate those profits so that the burden will be borne in as large a measure as possible by those who are the beneficiaries.

Who Benefits?

Who benefits from highway improvement?

In any attempt to answer this, and the many other questions ahead of us, there remains still much research work to be done. Now, therefore, the purpose must be to sketch out the paths which are indicated by governmental studies up to the present time, in order that the issues may be clarified.

Broadly speaking, we will all agree that those who are alive today and those who come after them down to the children of the third and fourth generations, will benefit from highway construction, provided that, once constructed, the highway is maintained.

Some might go further and say that the highway, if maintained, will be of benefit for all time, but looking at this as practical men, we can concern ourselves only with a definite period of time wherein the inventive genius of the country would not have opportunity to upset our present scheme of transportation by new methods. This might well be from fifty to one hundred years.

Long Term Bonds Equitable

It would then appear as a general proposition, assuming the ability of our engineers to maintain a highway once built, that the cost of highway construction should first of all be divided between this generation and those to come, which, of course, at once implies long term highway bond issues.

Here again, however, we come at once to practical limitations, the extent of which must be finally determined by economic research.

Can the highway engineer maintain the road once built?

We have been accustomed to hear that roads have broken down under heavy motor traffic and that money expended for them has been wasted. Is this true? Fortunately, in this field we appear to be arriving at a definite demonstration of facts. Engineers tell us, for example, that forty to fifty per cent. of the cost of construction of a highway is a permanent investment, assuming that the highway has been properly located. The right of way, the grade, the drainage, bridges, shoulders and engineering costs need only be paid for once. It is the surface which wears.

Engineering records show that here the loss is less than is popularly supposed since in the rebuilding of a surface it is possible to salvage much of the material and use it for a base for new surfacing.

Constant Maintenance Essential

This leaves us with a definite need for constant maintenance and that maintenance is limited not by physical but by financial ability. We have placed too much stress upon the original construction and not enough upon the constant maintenance.

Can we assume proper location of the highway? Here again is a field for the student of political administration in its relation to economics. The state engineer looking at a map which shows

the economic development of a state, the routes of through travel, and the feeder lines, has before him a bird's-eye picture which enables him to determine positively and accurately where highways should go. We cannot expect the local official to be able to gauge this so well. Centralization of authority seems essential if the public's funds are to be properly conserved.

Should we seek to develop all highway construction through bond issues?

This question is one which cannot be fully answered until those preceding it are taken into account.

Before we expend any funds we must know that the benefits to be derived from the improvements of a highway are more than sufficient to justify the cost of that improvement.

We must then be sure when bond issues are proposed that the improvement promises something more than the cost of maintenance.

Funds Must Be Assured

Before granting the authority to issue bonds, provision must be made for the proper control of construction expenditures, adequate maintenance and sinking funds.

These points checked off, we are likely to find that we have come down to a consideration of the improvement of the main state systems, which will average about seven per cent. of the total mileage of this country. When completed, this system will place all of us on main roads, or but a few miles away and through the feeder lines we will be enabled to reach the great highway and deliver our commodities to market.

Here then is the field in which the cost of highway construction should be divided between this generation and those to come.

We are proposing that this generation shall undertake to build these roads, charge the cost to capital account, pay for them by long term bonds, use them and pass them on to the next generation in as good or better condition than we built them. We propose that each generation shall pay a fair rental charge for the use of these roads in the sum of amortization charges, and interest, plus maintenance.

Shall we not then proceed as would a business man, or a farmer, when setting up his establishment? The full cost of the factory or the farm would not be assessed against the first year's income,

but would be carried over a term of years, during which time the returns would be enough to meet all charges and pay a profit as well.

Does Not Mean Universal Bonding

This must not be taken to mean, however, that we should at once proceed arbitrarily to say to every state, you must have a bond issue to take care of your road improvement program. As in all other phases of this complex problem there are a host of limitations to be set up, and it is only through investigations by trained men that we shall ultimately find the correct answer.

Dogmatic statements must be avoided. Prejudice must be eliminated.

Analyses of highway development to date show that there are two general sets of conditions which apply. The first is found in those states which, like New York, Massachusetts and some of the other eastern and perhaps middle western sections, have to deal with a developed traffic problem and have already met with many of the conditions mentioned.

Perhaps Maryland is the best example, for it has a highly developed state system paid for in large part by long term bonds and now maintained from current operating funds. There is no need for a further bond issue in Maryland today. Perhaps there never will be. The problem of construction on the state system has been largely dealt with. In such cases there may be a period when short term bond issues will be found advisable in small lots, as often happens in business, but there is no thought that long term issues should be generally imposed where original construction has been advanced as it has in Maryland.

Where Bonds Are Needed

The other condition is that of the southern or western states, where valuations are low, mileage is high and traffic not yet developed. Here the problem is one of construction, largely. The general tax burden is high and any attempt to meet the needs of highway development from current funds would result in so retarding the program that dollars would be lost in diminished or retarded economic development where pennies would be saved.

The question which here must be answered is, "Do the increased profits resulting from highway construction under bond

issues, offset the difference in cost as between "pay-as-you-use" and "pay-as-you-go" methods of financing?"

Looking at this from the viewpoint of the business man suggesting clues to be run down, I want to state at the outset that if you consider this problem from the standpoint of building, let us say one hundred miles on a pay-as-you-go policy in ten years' time as against one hundred miles in one year with a bond issue, in the first case, in ten years you will have paid all of the principal charges of that one hundred mile construction, but will have obtained only an average use of fifty miles for the entire ten year period, while one hundred miles built in one year give the use of the entire mileage.

This immediately suggests again the question of the benefits to be derived. In either case it must be assumed that there is to be a benefit, or the program should not be undertaken. The differences then is the interest charged.

Against that there is the ten year use of the one hundred miles, and engineering investigations now under way indicate that the difference in operating costs of transport alone over the good road as against the bad would be sufficient to defray the interest charges many times over, even if we discarded the social benefits which inure.

Who Shall Pay?

Thus far we have discussed as beneficiaries only two general classes, this generation and those that follow.

If the highway bond issue plan is to be carried out, however, we must set up the conditions under which these bonds will be issued, and in order to do so we should determine more specifically the question of beneficiaries in order that, in setting up our source of revenue, we shall be as equitable as possible.

At once a new set of questions presents itself for examination.

What is the effect of highway improvement upon agricultural valuations?

What is the effect of highway improvement upon urban valuations?

What is the effect of highway improvement upon the operating costs of the user, the agent of the public?

The answers will vary according to the typographical conditions, economic conditions, the extent and character of the traffic.

Each state will have to meet this situation as its own needs demand and these needs can only be finally determined by specific inquiry and investigation upon a very broad scale.

There are few today, however, who will deny the influence of highway development upon the farmer. The truck gardener, the dairy products man, and even the producer of heavy staples, has found his markets favorably affected by highway improvement. Perhaps more important, the educational and social advantages derived from highway extension have opened a new vista to all.

Likewise, the development of urban properties and particularly of suburban properties has been perceptibly affected. No one who drives a motor vehicle or a horse will question the beneficial effect of highway improvements.

How far the use of large units made possible by road improvement has affected the economics of all three groups mentioned, is a point which few can discuss fully yet, particularly with regard to road improvement costs, but here again there is a definite problem to be worked out.

General Taxes for General Benefit

So that while the relative amounts may differ, it seems that any fair plan for construction should be based upon general taxes for construction purposes, since all classes are enumerated in the three broad divisions mentioned.

When maintenance is considered, however, a different answer presents itself. The damage to the wearing surface is done by traffic. Traffic benefits first by maintenance in lowered operating costs, so traffic should be expected to meet this levy.

Yet at once the question arises as to what is maintenance?

Shall we say that a manufacturer building a new plant or installing new machinery to take care of increased business, should consider *that* an item of current expense?

Could the farmer or business man who attempted to assess such costs against his crop or output in a single year, expect the buyer to pay it cheerfully?

Likewise would the extension of a highway or its widening be an item in maintenance or construction?

There seems to be a close parallel in these two instances and undoubtedly where cases of this kind occur, ordinary business practice will prevail.

The same problem presents itself when a road is lifted from a low to a higher type to the extent of the difference in cost.

Regulation Must Be Flexible

Another consideration which must be made a matter for thorough study is found in regulation of traffic on the highways. The whole question of finance is tied up in this point, because, after all, the only justification for any highway improvement, as I have already noted, is the service which the highway renders and that service should be permitted to grow without restraint as long as it is sound economically.

If we restrict traffic unwisely, maintenance costs may be less, but transport operating costs may be swelled out of all proportion, and since the public pays the bill in any case, we should seek to make highway transport in its entirety function at the lowest possible cost.

Here we can suggest a prolific field for investigation. Overloading apparently damages both road and vehicle. Seasonal limitations appear to be necessary under certain conditions, and still with a railroad congestion such as obtains today, *which* is of the greater public moment—the maintenance of a low grade highway surface, or its destruction by goods which must be moved?

There should be definite restrictions on maximum loads, of course, at least until the highway builder can catch up with the highway user—a goal still far in the future—but it is not necessary to consider that phase in detail now.

I only wish to point out that unwise regulation, just as abuse of the road by the user, may operate to the detriment of the public interest, and therefore both should be carefully guarded against, particularly where we are concerned with the general aspects of a broad financial program predicated upon the need for traffic development.

Summing up the points made, then, I would like to suggest that out of the questions presented for your analysis we have indicated the need for a very definite policy of highway finance.

Suggested Financial Policy

Personally, I should say that subject to varying conditions of highway development, of valuations, population and traffic in the several states, the program resolves itself into this:

FIRST: The preparation of a "construction budget" by every state, estimating the cost of the primary and secondary roads to be built, year by year, for the next ten years.

SECOND: That based upon the stage of development of that program at this time, the cost of construction — all or part — shall be met by bond issues, except in those states where the construction program is practically complete.

THIRD: That a budget of current operating costs be set up to defray — interest on bonds, amortization charges, and maintenance. The amount necessary to pay interest and amortization should be included in the general tax levy. The cost of maintenance should be assessed against the user.

FOURTH: That all expenditures should be under the control of the state highway departments.

FIFTH: That regulatory powers should be as flexible as possible and lodged only within the state highway department, to be administered in accordance with the needs of the public.

Sound Bond Methods

As a summary for consideration where state highway bond issues are necessary, I suggest that:

FIRST: Bond issues should be serial in form and issued for as long a period as fifty years. The fund should be expended under rigid engineering control, and provision must be made for sufficient current income to pay interest, amortization charges and adequate maintenance.

SECOND: Interest on bonds and amortization should be paid for from general taxation. Maintenance costs should be charged against traffic.

THIRD: Maintenance shall include all charges up to and including reconstruction, save extensions or added replacement costs where an inferior is replaced by a superior type of surface.

FOURTH: Only that type of road shall be constructed which is adequate for the needs of present and future traffic. This shall be determined by careful surveys both of traffic and of economic possibilities.

In conclusion, may I express the opinion of a business man that, after all, this question is a business problem — that, if you please, of manufacturing transportation. It must be dealt with from that viewpoint alone, if the interests of the public are to be conserved.

**END OF
TITLE**